1. (Original) A motor/generator for a flywheel energy storage system having a housing adapted to be evacuated and maintained at a low pressure atmosphere, a flywheel supported for low-loss rotation in said low pressure atmosphere within said housing on a bearing system, a nonevaporable getter for maintaining said low pressure atmosphere in said housing, and a motor/generator for accelerating and decelerating said flywheel for storing and retrieving energy, said motor/generator comprising:

a rotor that is coupled to and rotates with said flywheel;

a stationary stator that cooperates with said rotor for converting between electrical and mechanical energy in said flywheel system and contains electromagnetic coils;

wherein said stator has a thin barrier coating for minimizing degredation of said low pressure atmosphere by minimizing outgassing from said stator into said housing.

2. (Original) A motor/generator for a flywheel energy storage system as described in claim 1, wherein:

said flywheel is constructed principally of steel.

3. (Original) A motor/generator for a flywheel energy storage system as described in claim 2, wherein:

said barrier coating is a metal.

4. (Original) A motor/generator for a flywheel energy storage system as described in claim 2 wherein:

said electromagnetic coils are substantially enclosed in said barrier coating.

5. (Original) A motor/generator for a flywheel energy storage system as described in claim 4, wherein:

said motor/generator stator has a laminated core; and

said barrier coating covers vacuum exposed surfaces of all laminations in said motor/generator core.

6. (Original) A motor/generator for a flywheel energy storage system as described in claim 2, wherein:

said motor/generator has a separate motor and a separate generator.

7. (Original) A motor/generator for a flywheel energy storage system as described in claim 2, wherein:

said metal barrier coating is constructed of metal foil.

8. (Original) A motor/generator for a flywheel energy storage system as described in claim 7, wherein:

said foil is bonded to said stator after manufacture.

9. (Original) A motor/generator for a flywheel energy storage system as described in claim 7, wherein:

said foil is bonded to said stator during manufacture by potting said stator with a bonding agent inside said foil.

10. (Original) A motor/generator for a flywheel energy storage system as described in claim 2, wherein:

said stator is enclosed in a nonmetallic container that holds a cooling liquid and said nonmetallic container is coated with a barrier coating;

11. (Original) A motor/generator for a flywheel energy storage system as described in claim 1, wherein:

said barrier coating is applied by physical vapor deposition.

12. (Original) A motor/generator for a flywheel energy storage system as described in claim 10, wherein:

said barrier coating is a metal.

13. (Original) A motor/generator for a flywheel energy storage system as described in claim 10, wherein:

said barrier coating is a ceramic.

14. (Original) A motor/generator for a flywheel energy storage system as described in claim 1, wherein:

said barrier coating is applied by a process selected from the group consisting of dipping, wiping, spraying and brushing.

15. (Original) A motor/generator for a flywheel energy storage system as described in claim 1, wherein:

said barrier coating is in the form of a colloidal suspension of particles prior to application.

16. (Original) A motor/generator for a flywheel energy storage system as described in claim 15, wherein:

said particles in said colloidal suspension of particles are carbon particles.

17 and 18 (Canceled)

19. (New) A flywheel system made of components assembled inside an evacuated chamber, said flywheel system having a barrier coating to reduce outgassing from said components of said flywheel system, comprising:

a deposit of a vaporized metal vapor as barrier coating of said metal inside said chamber on said flywheel system components.

20. (New) A flywheel system as described in claim 19 wherein:

said barrier coating has a thickness between 1000 Angstroms and 10 mils.

Respectfully submitted,

542 SW 298th Street
Federal Way, WA 98023
Telephone: (253) 941-7683
FAX: (253) 941-3623

J. Michael Neary, Reg. No. 25,453
Attorney for Applicant